Amendments to the Claims

Please cancel claims 2, 6, 12, and 24 without prejudice.

Please amend the claims as follows:

1. (Currently amended) A method for multicasting a data cell received in a crossbar switch structure, comprising:

registering an address and priority corresponding to [[said]] the data cell at an ingress port in a memory cell, the memory cell being addressable by the priority of the data cell, the ingress port being one of a plurality of ingress ports for the crossbar switch;

controlling a flow of [[said]] the data cell based on the priority of the data cell;

asserting a multicast service request for [[said]] the data cell using the memory cell;

in response to [[said]] the asserting of the multicast service request, comparing a request priority for the data cell with request priorities of one or more other multicast data cells asserted for ingress ports of the crossbar switch;

responsive to the comparing of request priorities, selecting the data cell for transmission and granting [[said]] the multicast service request for the ingress port;

arranging a multicast fan-out for [[said]] the data cell; and

in response to [[said]] the arranging of the multicast fan-out for the data cell, configuring [[said]] the crossbar switch structure for the transfer of the data cell to a plurality of egress ports of the crossbar switch.

2. (Cancelled)

3. (Currently amended) The method as recited in Claim 1, further comprising granting service to [[said]] the ingress port, wherein [[said]] the granting of service to the ingress port is performed upon [[said]] the granting [[said]] of the multicast service request.

4. (Currently amended) The method as recited in Claim 3, wherein [[said]] the granting of the multicast service request is performed before [[said]] the arranging of the multicast fan-out.

5. (Currently amended) The method as recited in ~~Claim 1~~ Claim 8, wherein [[said]] the data cell has service priority over [[a]] the unicast cell.

6. (Cancelled)

7. (Currently amended) The method as recited in Claim 1, wherein [[said]] the arranging of the multicast fanout comprises:

generating a request signal for [[said]] the multicast fan-out;

asserting a transfer request to [[a]] each of the plurality of [[affected]] egress ports; and

in response to [[said]] asserting [[a]] the transfer request, giving by each of [[said]] the plurality of egress ports a corresponding grant signal to [[said]] the ingress port.

8. (Currently amended) The method as recited in Claim 7, further comprising:

determining that [[said]] the data cell is not immediately departing, wherein ~~said determining~~ the determination that the data cell is not immediately departing is performed after said giving of grant signals by each of said egress ports;

in response to ~~said determining~~ the determination, further determining that a unicast cell is ready for launch; and

in response to ~~said further~~ determining that the unicast cell is ready for launch, launching [[said]] the unicast cell prior to the launching of the data cell.

9. (Currently amended) The method as recited in Claim 1 further comprising:

determining that a unicast iteration is in progress; and

in response to [[said]] determining the unicast iteration is in progress, preventing generation of a request signal by [[said]] the ingress port while [[said]] the unicast iteration is in progress; wherein [[said]] determining that the unicast iteration is progress and [[said]] preventing generation of a request signal are performed before [[said]] controlling the flow of the data cell.

10. (Currently amended) The method as recited in Claim 1, wherein [[said]] the address corresponding to the data cell further corresponds to a location within an ingress queue of [[said]] the switch structure at which a payload corresponding to [[said]] the data cell is stored.

11. (Currently amended) A system for multicasting a data cell received in a crossbar switch structure, comprising:

a multicast controller for performing a multicast control function for an ingress port of the crossbar switch, the ingress port being one of a plurality of ingress ports of the crossbar switch; and

a multicast grant generator coupled to [[said]] the multicast controller for granting multicast service to ~~said data cell~~ to a data cell the ingress port; wherein [[said]] the system performs a process for multicasting a data cell received in [[a]] the crossbar switch structure, [[said]] the process comprising:

registering an address and priority corresponding to [[said]] the data cell at [[an]] the ingress port in a memory cell, the memory cell being addressable by the priority of the data cell, the ingress port being one of a plurality of ingress ports for the crossbar switch;

controlling a flow of [[said]] the data cell, the flow being based on the priority of the data cell;

asserting a multicast service request for [[said]] the data cell using the memory cell;

in response to [[said]] the asserting of the multicast service request, comparing a request priority for the data cell with request priorities of one or more other multicast data cells asserted for ingress ports of the crossbar switch;

responsive to the comparing of request priorities, selecting the data cell for transmission and granting [[said]] the multicast service request for the ingress port by the multicast grant generator;

arranging a multicast fan-out for [[said]] the data cell to a plurality of egress ports of the crossbar switch; and

in response to [[said]] the arranging of the multicast fanout for the data cell, configuring [[said]] the crossbar switch structure for the transfer of the data cell to the plurality of egress ports of the crossbar switch.

12. (Cancelled)

13. (Currently amended) The system as recited in Claim 11, wherein [[said]] the multicast controller comprises:

a multicast storage queue for storing [[said]] the data cell; and

a multicast storage controller coupled to [[said]] the multicast storage queue for controlling the flow of [[said]] the data cell within [[said]] the multicast storage queue.

14. (Currently amended) The system as recited in Claim 13, wherein [[said]] the multicast storage queue comprises a plurality of registers.

15. (Currently amended) The system as recited in Claim 14, wherein [[said]] the plurality of registers comprises 32 registers.

16. (Currently amended) The system as recited in Claim 13, wherein [[said]] the multicast storage controller reshuffles a service order for existing data cells within [[said]] the multicast storage queue upon receiving [[said]] the data cell.

17. (Currently amended) The system as recited in Claim 13, wherein [[said]] the multicast storage controller asserts a multicast based priority over a unicast data cell.

18. (Currently amended) The system as recited in Claim 13 wherein [[said]] the multicast storage controller makes a priority based service request to [[said]] the multicast grant ~~generator:~~ generator, and wherein, responsive to [[said]] the service request, [[said]] the multicast grant generator provides a service grant; and wherein, responsive to [[said]] the service grant, [[said]] the multicast storage controller extracts [[said]] the data cell from [[said]] the multicast storage queue for service.

19. (Currently amended) The system as recited in Claim 18, wherein [[said]] the multicast grant generator updates a preference pointer for the provision the service grant.

20. (Currently amended) The system as recited in Claim 11, further comprising a multicast request generator register for generating a request signal to effectuate multicast fan-out of [[said]] the data cell.

21. (Currently amended) The system as recited in Claim 11, further comprising a read out and transfer register for generating a read signal to effectuate transfer of a payload corresponding to [[said]] the data cell.

22. (Currently amended) A method for multicasting a multicast cell in a crossbar switch, comprising:

recording [[said]] an address 'i' and a priority 'p' of the multicast cell in a multicast storage register set at a port 'n' of the crossbar switch, the storage register being addressable by the priority of the multicast cell;

re-shuffling a service order in [[said]] the storage register set based upon [[said]] the priority 'p' of the multicast cell;

controlling a flow of [[said]] the multicast cell in [[said]] the multicast storage register set based on the priority of the multicast cell;

asserting a multicast service request through the storage register;

in response to [[said]] the asserting of the multicast service request, comparing a request priority for the multicast cell with request priorities of one or more other multicast data cells asserted for ingress ports of the crossbar switch;

responsive to the comparing of request priorities, selecting the data cell for transmission and giving a multicast service grant for the multicast cell;

in response to [[said]] giving [[a]] the multicast service grant, generating a plurality of request signals corresponding to [[said]] the fan-out of the multicast cell to a plurality of egress ports of the crossbar switch;

in response to [[said]] generating the plurality of request signals, making a transfer request to a plurality of egress ports corresponding to [[said]] the fan-out;

in response to said making, giving a plurality of grant signals from the plurality of egress ports to [[said]] the port 'n';

correspondingly configuring [[said]] the crossbar switch to transfer [[said]] the multicast cell; and

in response to [[said]] configuring the crossbar switch, transferring [[said]] a payload of the multicast cell to the plurality of egress ports.

23. (Currently amended) The method as recited in Claim 22, further comprising, in response to [[said]] giving a multicast service grant, changing a preference pointer value to correspond to [[said]] port 'n' in order to provide for the service grant.

24. (Cancelled)

25. (Currently amended) The method as recited in Claim 22, wherein [[said]] the multicast cell has a service priority over a unicast cell.

26. (Currently amended) The method as recited in Claim 22, further comprising:

determining that [[said]] the multicast cell is not departing immediately, wherein said determining is performed after [[said]] giving [[a]] the plurality of grant signals to [[said]] port 'n';

in response to [[said]] determining that the multicast cell is not departing immediately, further determining that [[a]] the unicast cell is ready for launch; and

in response to [[said]] further determining that the unicast cell is read for launch, launching said unicast cell.